

WHAT IS CLAIMED IS:

- 1 A method for treating a small-tank toilet system comprising the steps of:
- 2 (a) selecting a bacteria and a surfactant;
- 3 (b) charging the small-tank toilet system with flushing fluid;
- 4 (c) combining the bacteria, the surfactant, and the flushing fluid.

- 1 2. The method of claim 1 wherein the bacteria is selected from the group consisting
- 2 of *Bacillus licheniformis*, *Pseudomonas fluorescens*, *Alcaligenes latus*, *Bacillus subtilis*, and
- 3 *Pseudomonas putida*.

- 1 3. The method of claim 2 wherein the bacteria is combined with the surfactant in a
- 2 weight ratio from about 10% to about 50%.

- 1 4. The method of claim 2 wherein the bacteria is combined with the surfactant in a
- 2 weight ratio from about 10% to about 30%.

- 1 5. The method of claim 2 wherein small-tank toilet system is utilized in a group
- 2 consisting of airplanes, busses, campers, trains, boats, and free standing portable toilet.

- 1 6. The method of claim 1 further comprising the step of combining a coloring agent
- 2 with the bacteria, the surfactant, and the flushing fluid.

- 1 7. The method of claim 1 further comprising the step of combining a deodorizer with
- 2 the bacteria, the surfactant, and the flushing fluid.

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2 *B4*
3 8. The method of claim 1 further comprising the step of mixing the bacteria and
4 surfactant into a composition before combining it with the flushing fluid, wherein said
composition is a form selected from the group consisting of a liquid form, a powder form,
and a solid block-tablet form.

1 9. The method of claim 8 further comprising the steps of:
2 (a) mixing a filler in the composition; and
3 (b) mixing a food source in the composition.

1 *B3*
2 *B4*
3 10. The method of claim 9 further comprising the steps of:
4 (a) the filler is selected from the group consisting of calcium carbonate and
5 sodium sulfate;
6 (b) the food source is dried brewers yeast;
7 (c) mixing a deodorant in the composition; and
8 (d) mixing a coloring agent in the composition.

1 *B3*
2 *B4*
3 11. The method of claim 9 further comprising the steps of:
4 (a) the filler is mixed in the composition at least about 50% by weight;
5 (b) the food source is mixed in a range from about 0.1% to about 5% by weight;
6 (c) the deodorant is mixed in the composition in a range from about 0.05% to
7 about 2% by weight; and
8 (d) the bacteria and the surfactant are mixed in the composition in the range from
9 about 5% to about 50% by weight.

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12. The method of claim 9 further comprising the steps of:
- (a) the filler is mixed in the composition with the range from about 50% to about 80% by weight;
 - (b) the food source is dried brewers yeast in the composition in the range from about 1% to about 2% by weight;
 - (c) the deodorant is mixed in the composition in a range from about 0.2% to about 1% by weight; and
 - (d) the bacteria and the surfactant are mixed in the composition in the range of about 15% to about 20% by weight.

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13. The method of claim 12 further comprising the step of combining a coloring agent with the bacteria and the surfactant.

14. The method of claim 8 further comprising the steps of:
- (a) mixing water in the composition;
 - (b) mixing an alcohol in the composition; and
 - (c) wherein the form of the composition is the liquid form.

1 ~~15~~ The method of claim 14 further comprising the steps of:

2 (a) the water is mixed in the composition at least about 50% by weight;

3 (b) the alcohol is mixed with a monoethanolamine, the bacteria, and the
4 surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
5 monoethanolamine, bacteria, and surfactant;

6 (c) the monoethanolamine is mixed with the alcohol, the bacteria, and the
7 surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
8 monoethanolamine, bacteria, and surfactant; and

9 (d) the bacteria and the surfactant are mixed with the alcohol and
10 monoethanolamine in the range from about 20% to about 97% by weight of the alcohol, the
11 monoethanolamine, bacteria, and surfactant.

12 16. The method of claim 15 further comprising the steps of:

13 (a) the alcohol is mixed with a monoethanolamine, the bacteria, and the
14 surfactant in the range from about 5% to about 20% by weight of the alcohol, the
15 monoethanolamine, bacteria, and surfactant;

16 (b) the monoethanolamine is mixed with the alcohol, the bacteria, and the
17 surfactant in the range from about 5% to about 15% by weight of the alcohol, the
18 monoethanolamine, bacteria, and surfactant; and

19 (c) the bacteria and the surfactant are mixed with the alcohol and
20 monoethanolamine in the range from about 65% to about 90% by weight of the alcohol, the
21 monoethanolamine, bacteria, and surfactant.

1 17. The method of claim 9 further comprising the step of combining a binding agent with
2 the bacteria and the surfactant.

18. A method for treating a small-tank toilet system comprising the steps of:
- (a) removing a first flushing fluid from a small-tank toilet system;
 - (b) charging the small-tank toilet system with a second flushing fluid;
 - (c) selecting a bacteria, which bacteria is selected from the group consisting of *Bacillus licheniformis*, *Pseudomonas fluorescens*, *Alcaligenes latus*, *Bacillus subtilis*, and *Pseudomonas putida*;
 - (d) selecting a surfactant for combining with the bacteria;
 - (e) charging the small-tank toilet system with the bacteria and the surfactant;
 - (f) repeating steps (a)-(f).

19. The method of claim 18 further comprising the steps of:
- (a) combining a filler, a food source, with the bacteria and the surfactant, wherein
 - (i) the filler is calcium carbonate and is combined with the food source, the methyl salicylate, the bacteria, and the surfactant by at least about 50% by weight;
 - (ii) the food source is dried brewers and is combined with the filler, the methyl salicylate, the bacteria, and the surfactant in a range from about 0.1% to about 5% by weight; and
 - (iii) the bacteria and the surfactant with the filler, the food source, and the methyl salicylate in a range from about 5% to about 50% by weight.

1 20. The method of claim 18 further comprising the steps of:

2 (a) combining water, alcohol, and monoethanolamine, with the bacteria and the
3 surfactant, wherein

4 (i) water is combined with the alcohol, the monoethanolamine, the
5 bacteria, and the surfactant, by at least about 50% by weight;

6 (ii) the alcohol is combined with the monoethanolamine, the bacteria, and
7 the surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
8 monoethanolamine, bacteria, and surfactant;

9 (iii) the monoethanolamine is combined with the alcohol, the bacteria, and
10 the surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
11 monoethanolamine, bacteria, and surfactant; and

12 (iv) the bacteria and the surfactant are combined with the alcohol and
13 monoethanolamine in the range from about 20% to about 97% by weight of the alcohol, the
14 monoethanolamine, bacteria, and surfactant.

- 1 21. An apparatus for treating human waste products comprising:
2 (a) a small-tank toilet system;
3 (b) a flushing fluid charged into the small-tank toilet system; and
4 (c) a bacteria and a surfactant combined with the flushing fluid.

1 22. The apparatus of claim 21 wherein the bacteria is a selected from the group consisting
2 of *Bacillus licheniformis*, *Pseudomonas fluorescens*, *Alcaligenes latus*, *Bacillus subtilis*, and
3 *Pseudomonas putida*.

1 23. The apparatus of claim 21 wherein the bacteria is combined with the surfactant in a
2 weight ratio from about 10% to about 30% by weight.

1 24. The apparatus of claim 22 wherein the bacteria is combined with the surfactant in a
2 weight ratio from about 10% to about 30%.

1 25. The apparatus of claim 21 further comprising a coloring agent combined with the
2 bacteria, the surfactant, and the flushing fluid.

1 26. The apparatus of claim 21 further comprising an deodorizer combined with the
2 bacteria, the surfactant, and the flushing fluid.

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27. The apparatus of claim 21 further comprising:

- 2 (a) a filler and, a food source, combined with the bacteria and the surfactant,
3 wherein
4 (i) the filler is calcium carbonate and is combined with the food source,
5 the methyl salicylate, the bacteria, and the surfactant by at least about 50% by weight;
6 (ii) the food source is dried brewers yeast and is combined with the filler,
7 the methyl salicylate, the bacteria, and the surfactant in a range from about 0.1% to about 5%
8 by weight; and
9 (iii) the bacteria and the surfactant with the filler and, the food source, in
10 a range from about 5% to about 50% by weight.

11 28. The apparatus of claim 21 further comprising:

- 12 (a) water, alcohol, and monoethanolamine, combined with the bacteria and the
13 surfactant, wherein
14 (i) water is combined with the alcohol, the monoethanolamine, the
15 bacteria, and the surfactant, by at least about 50% by weight;
16 (ii) the alcohol is combined with the monoethanolamine, the bacteria, and
17 the surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
18 monoethanolamine, bacteria, and surfactant;
19 (iii) the monoethanolamine is combined with the alcohol, the bacteria, and
20 the surfactant in the range from about 1.5% to about 60% by weight of the alcohol, the
21 monoethanolamine, bacteria, and surfactant; and
22 (iv) the bacteria and the surfactant are combined with the alcohol and
23 monoethanolamine in the range from about 20% to about 97% by weight of the alcohol, the
24 monoethanolamine, bacteria, and surfactant.

1 29. The apparatus of claim 21 further comprising an airplane on which the small-tank
2 toilet system is installed.

1 30. The apparatus of claim 21 further comprising a bus on which the small-tank toilet
2 system is installed.

1 31. The apparatus of claim 21 further comprising a camper on which the small-tank toilet
2 system is installed.

1 32. The apparatus of claim 21 further comprising a train on which the small-tank toilet
2 system is installed.

1 33. The apparatus of claim 21 further comprising a boat on which the small-tank toilet
2 system is installed.

1 34. The apparatus of claim 21 further comprising a free-standing portable toilet on which
2 the small-tank toilet system is installed.

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